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ABSTRACT

This handbook was developed for use by individuals with limited experience in performing good survey-based research. The essential procedures in the preparation of a survey are outlined and discussed. The method of survey construction proposed consists of several tasks: (1) survey objectives and research questions are specified; (2) literature is reviewed and abstract concepts are defined; (3) question formats and type of statistical analysis are selected; (4) survey items are written and arranged in order; (5) physical appearance of the questionnaire is adjusted; (6) cover letter and instructions are prepared; and, finally, (7) the survey is validated. Examples illustrate the method for properly completing each procedure, and a summary checklist is provided to evaluate the survey to be used. A sample self-evaluation form for survey development completes the information in the manual. (DWH)

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A Guide to Survey Development Manual on Writing a Survey

Susan E. Stacey

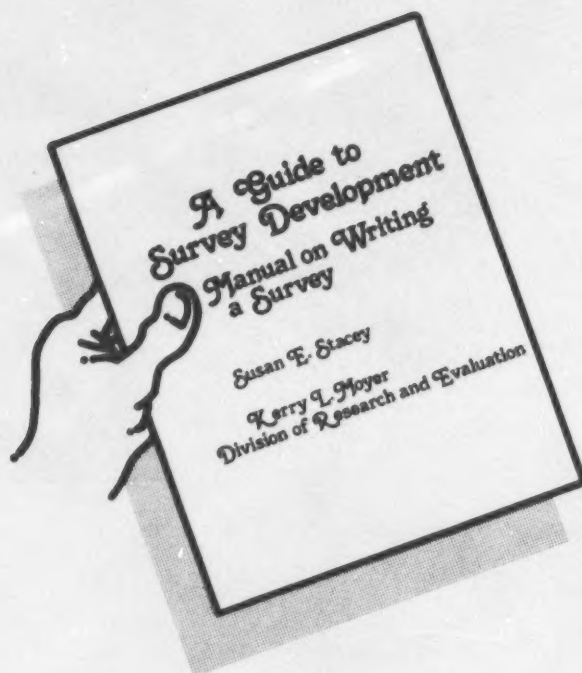
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Pennsylvania Department of Education 1982

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INTRODUCTION

This guide is for persons who have limited experience with undertaking good survey-based research. It challenges a common belief among educators and practitioners that a survey study is the easiest type of research to do and that "anybody can do one."

Many research studies begin with a superficial review of literature and a hastily constructed questionnaire. Then, when the surveys are returned, the problems begin. The first problem is often, "Now I have some information; what does it mean?" Frequently the results mean very little. The information returned is in a form that cannot be analyzed or interpreted. This guide is designed to help you avoid the pitfalls of poor survey studies by outlining essential steps in the preparation of the survey.

A 10-step approach to the construction of surveys is presented:

1. Specifying survey objectives and research questions
2. Reviewing the literature
3. Defining abstract concepts
4. Selecting question formats
5. Selecting the statistical analysis
6. Writing the survey questions
7. Ordering the questions in the survey
8. Adjusting the physical appearance of the survey
9. Preparing the cover letter and instructions
10. Validating the survey

A discussion of the 10 steps, a process to complete each step, and examples of completed tasks are provided in this manual. All examples are based upon the following situation:

EXAMPLE: The Situation

The Scenic School District is considering the construction of a new high school to replace Scenic High School and Northern High School, two older buildings. There is disagreement among residents of the district about the feasibility and location of a new building. The school administration has decided to conduct a survey of the residents to determine what they know about the school district and their attitudes toward the proposed building program.

The district residents will be questioned about tax rates, present facilities and building conditions, enrollment figures, bussing, the location of a new building, and about their perception of the need and advantages of the new school. Such questions allow district personnel to determine public misconceptions about Scenic School District and to study the effect of such misconceptions upon attitudes toward the building program. Relationships between the opinions and personal characteristics of residents can be studied by asking a few questions about age, home ownership, place

of residence, and number of school-age children.

A survey and cover letter based upon this example is found on pages 15 through 17. The reader may benefit by referring to this survey while reading this manual.

STEP 1: SPECIFYING THE SURVEY OBJECTIVES AND RESEARCH QUESTIONS
(WHAT DO WE NEED TO KNOW?)

The first and most crucial step in the development of a good survey is specifying the objectives of the research study. Exactly what is to be learned or discovered as a result of the research must be clear. Use the listed objectives to write research questions. Research questions define the survey topics and information needed.

EXAMPLE: Objectives of a survey

The objectives of the Scenic School District survey are:

1. Measure resident knowledge about the school district
2. Record attitudes of the resident toward the proposed building program
3. Collect personal information about the residents who are surveyed

Research questions are then written for each objective.

Knowledge

1. Do residents know:
 - a. the number of schools within the district?
 - b. the age of the school buildings?
 - c. the geographic size of the district?
 - d. the current yearly tax rate?
2. What do residents know about:
 - a. the physical condition of the present school buildings?
 - b. the facilities at these buildings?

Attitudes

1. Are residents satisfied with the curriculum being offered to high school students at the two present high schools?
2. What effect do residents believe a new building would have on taxes? Is this related to home ownership and/or location within the district?
3. Do residents believe that combining two high schools into one will eventually result in:
 - a. improved instruction?
 - b. broader curriculum offerings?
 - c. improved relationships among students from various communities within the school district?
 - d. reduced cost of operation?

4. Should children be bussed to the new building? What is the maximum riding time that would be tolerated? Is this related to location of a new school within the district?
(This question is important because the district is about 55 square miles. Some students are currently bussed but the change to a single high school would involve more bussing.)
5. Do residents want a new building? Is this related to building location? home ownership? if they have children in school? location of residence within the district? age?

Personal Information

1. Do respondents:
 - a. own their own home?
 - b. have children in school?
 - c. send their children to public or private schools?
 - d. have preschool-age children?
2. In which township or borough within the district do the respondents live?

Make sure that you have a clear understanding of the issues yourself. Do not proceed until the survey objectives and research questions are written and agreed to by all interested parties. This is of first importance if survey results are to be meaningful to others.

STEP 2: REVIEWING THE LITERATURE (WHAT IS ALREADY KNOWN?)

The second step of survey development is a careful review of the literature about the topics included in the study. This step is an integral part of the construction of most surveys, although the effort needed depends upon the nature of the study and the experience of the survey writer.

Survey research dealing with educational theory especially benefits from literature reviews. Reading previous studies helps insure a new survey which collects interpretable information consistent with current knowledge. Any survey study designed to measure specific characteristics (such as attitudes, preferences, or concepts) should use previous studies to examine the type of questions asked, problems encountered, and expected results. At best, a literature review will provide a survey instrument and save you from constructing a similar questionnaire.

The survey for the Scenic School District example used in this guide primarily collects local information. Here, the goal is simply an assessment of residents' knowledge and attitudes toward one district and its building program. It is not concerned with generalizing the results to other school districts or demonstrating a theory. Thus, the potentially relevant literature would be reports of similar surveys by this or other school districts.

STEP 3: DEFINING ABSTRACT CONCEPTS (ASKING THE RIGHT QUESTION)

The review of literature facilitates the next step in survey construction: defining abstract concepts implied or stated in the study's objectives. Abstract concepts are terms, conditions, or events which are subject to different personal interpretations. These abstractions must be exactly defined to give direction to the survey questions and establish common understanding between the researcher and respondent. Words included in many educational studies appear to have common meaning but require very careful definition. Some examples are leadership, evaluation, and curriculum.

For instance, consider the term "social class." Social class can be defined by income, education, occupation, perception of social position, etc. Each definition would generate a different set of questions. Hence, survey questions cannot be written until each concept is fully defined. Without clear definitions, studies become uninterpretable because the respondents are never sure what the question was asking and the researcher will never know what the answers mean. Written objectives for the study may need to be changed or redirected after concepts are defined.

EXAMPLE: Concept Definition

An example of an abstract concept is found in the questions included in the Scenic School District study (Attitudes, Question 1). The meaning of the word "curriculum" at first seems obvious. However, curriculum is a word which has many definitions. Will the high school curriculum mean the number of courses offered or the content of courses? Will curriculum include clubs, extracurricular activities, and social events? For the purposes of this example survey, the term curriculum will include course content, clubs, and extra-curricular activities that are of an academic nature. It doesn't include interscholastic sports or social events.

STEP 4: SELECTING QUESTION FORMATS (HOW IS THE QUESTION ASKED?)

Question format must be selected before the actual writing of survey questions begins. Survey questions are generally one of two formats: open or closed response. Questions which provide the respondent a set of optional answers to choose from are called closed or structured. The closed format helps focus respondent attention on the specific concepts of interest and provides easy to summarize data. Closed response items can be answered quickly, require no writing from the respondent, and can be tabulated and summarized by almost anyone in a very short time.

Open-ended questions require the respondent to write answers spontaneously in their own words. This type of question is especially useful for exploratory research or situations in which the researcher cannot foresee all possible answers for a closed response question. Open-ended questions are easy to write but difficult to analyze.

Question format is influenced by the information being sought and the analysis of results. Generally, closed-response questions are easier to analyze but the open-ended questions often provide "quotable quotes" for the final research report. The type of statistical analysis to be performed should also be considered. For instance, if there is very little time to summarize and report survey findings it may be necessary to use only closed response questions.

Basically, the question is not whether to use open or closed responses, but when to use each of them to collect needed data. Many surveys combine question formats, thus capitalizing on the advantages of both.

EXAMPLE: Question Format

The same question is presented in an open format (a) and a closed format (b):

- a. What would be the major advantages and disadvantages of combining the two existing high schools into one high school?

COMMENT:

- b. Do you think that combining the two existing high schools into one school would result in:

	Don't Know	Yes	No
improved instruction?	_____	_____	_____
broader curriculum offerings?	_____	_____	_____
reduced cost of operation?	_____	_____	_____
increased student opportunities?	_____	_____	_____

STEP 5: THE STATISTICAL ANALYSIS
(HOW RESPONSES ARE REPORTED)

The type of statistical analysis needed will affect each survey question in the following ways: the number of options, whether or not the respondent is permitted multiple answers, and the choice of question format. Consider a situation in which information about the respondents' ages is desired. The respondents can be asked to report date of birth or to check the category which includes their age. If the researcher needed only to report the percentage of respondents falling within each of five age classifications, the latter procedure would be sufficient. If the researcher needed to calculate the average age of the respondents, asking an exact age or a birth date would be necessary.

EXAMPLE: Selecting the Statistical Analysis

Consider each of the following survey questions:

- a. Please indicate your age
- | | |
|-------|----------------|
| _____ | under 20 years |
| _____ | 20-24 years |
| _____ | 25-29 years |
| _____ | 30-34 years |
| _____ | 35-39 years |
| _____ | 40-44 years |
| _____ | 45-49 years |
| _____ | 50-54 years |
| _____ | 55-59 years |
| _____ | 60-64 years |
| _____ | 65 or older |

b. Please indicate your age

☐ under 15 years
☐ 15-24 years
☐ 25-64 years
☐ 65 years or older

c. Please indicate your age

☐ under 20 years
☐ 20-39 years
☐ 40-59 years
☐ 60 years or older

d. Do you think a new high school should be built?

☐ YES
☐ NO

If the survey is to determine the age distribution of residents within the Scenic School District, question a, b or c could be used, depending upon how detailed an analysis is needed. However, consider the research question: "Does age affect the manner in which a respondent answers question d?" Then the precision in question a is probably unnecessary, and the choice between b and c depends upon the statistical analysis of interest. For the purposes of this study, the following assumptions might be made: persons aged 20-39 are likely to be rearing children and, therefore, be closest to the educational process, while residents in the 40-59 age category will probably have most of their children out of school. This latter group of people may also be more likely to own a home. Finally, those over the age of 60 may be on a fixed income and represent another perspective of the school and tax situation. Residents in each of these age categories might be expected to have special reasons for either agreeing to or opposing a building program. Thus, because of the specific issue of interest, question c is preferred. Consideration of how collected information is to be analyzed makes easier the construction of questions which will yield the desired information.

The statistical relationship between questions c and d would be presented in this way:

Question c				
Question d	Under 20	20-39	40-59	60 and older
YES				
NO				

STEP 6: WRITING THE SURVEY QUESTIONS

After the objectives are clearly stated, the research questions prepared, the literature reviewed, all abstract concepts defined, the question format chosen, and a statistical analysis decided upon, the actual writing of survey questions may be undertaken.

Because the function of a question in a survey is to elicit a particular bit of information, it is essential that the respondent be able to read and understand the question as the researcher intended. To write a question that has exactly the same meaning for everyone is a difficult task. Listed below are some general rules which should be followed as each question is written.

1. Generally, keep the question short. Using fewer words (preferably 20 or less) will make the question easier to read and less confusing. Simplicity is important.

EXAMPLE: Keep the Question Short

- ___ 35 square miles
- ___ 45 square miles
- ___ 55 square miles
- ___ 65 square miles

Consider the following questions for the above responses:

- a. How many square miles in area do you think the Scenic School District is in size? (16 words)
- b. The Scenic School District includes an area of approximately how many square miles? (13 words)
- c. How many square miles does the Scenic School District include? (10 words)
- d. How large is the Scenic School District? (7 words)

The question is improved as it is simplified and made shorter.

2. State the question as clearly as possible. Knowing the purpose of each question often makes it easier to avoid ambiguity in wording. Here again, the importance of explicit objectives is illustrated.
3. Avoid biased terms and words that have double meaning. As well as some of the more obvious examples of words which may have several meanings, words such as you, all, any, few, majority, most, and fair are sometimes too vague.
4. Avoid the use of double barreled (asking two questions at once) and double negative questions. These types of questions can be confusing to the respondent and prevent accurate interpretations of collected information.

EXAMPLE: Double Barreled Question

- a. Do you think the new building program should include plans for a swimming pool and an athletic stadium?

Suppose a resident responds positively. Does this mean he or she is in favor of both the pool and stadium or only one of them? How should the answer be interpreted? Instead of question a, two separate questions should be written:

- a. Do you think the new building program should include plans for a swimming pool?
 - b. Do you think the new building program should include plans for an athletic stadium?
5. Beware of "loaded" questions and words. A loaded word is one which suggests automatic approval or disapproval because it is emotionally colored. Examples include words such as intelligent, popular, agreed, obvious, and usually.
 6. Avoid "leading" questions. These questions are not worded to be neutral. They suggest what the answer should be.

EXAMPLE: Leading Question

- a. Although building plans for a new high school have been approved by the school administration, do you think a new high school should be built?

The introductory phrase in this question should be eliminated because it "suggests" an answer. Instead, the question should be written as follows:

- a. Do you think a new high school should be built?
7. The choices in a closed response question should be mutually exclusive (no overlap) and exhaustive (reflect all possible answers).

EXAMPLE: Exclusive Responses

Where do you think a new high school should be located?

- | | |
|---|--|
| a. ☐ Carroll Township | b. ☐ Carroll Jr. High School Site |
| ☐ Present Jr. High School Site | ☐ Alternative Carroll Township Site |
| ☐ Other (please specify) | ☐ Other (please specify) |

Because the present junior high school site is located in Carroll Township, the options in a are not mutually exclusive. By making the options more specific (question b), they become mutually exclusive. By including the third option (other), the choices become exhaustive.

8. Avoid "talking down" to the respondents. While it is important to word questions so that the respondent understands what is being asked, care must be taken not to insult the respondent's intelligence.
9. Do not assume that everyone has the information being sought. The researcher must avoid giving the respondent the impression that he or she "ought to know" the answer. By doing this, the respondent often will guess simply not to appear uninformed.

EXAMPLE: Use of "Don't Know" Response

Check the option which best describes the general physical condition of the Scenic High School building:

- | | |
|---------------------------------------|--|
| a. ☐ Very good | b. ☐ Don't know |
| ☐ Good | ☐ Very good |
| ☐ Fair | ☐ Good |
| ☐ Poor | ☐ Fair |
| | ☐ Poor |

By adding the "don't know" in b, the respondents are not given the impression that they are expected to know the answer. Listing the "don't know" option first avoids tempting the respondent into guessing an answer.

STEP 7: ORDERING THE QUESTIONS IN THE SURVEY

After all of the questions are written, the order in which they will appear in the survey must be considered. A method frequently used is the "funnel approach." The survey begins with very broad and general questions and becomes more specific as it progresses. Therefore, the first few questions may be open-ended with the more structured questions being introduced later.

According to pollster George Gallup, the first questions should be written to see if the respondent is aware of the topic. These questions are generally free response. Next, more free response questions are asked to determine the respondent's uninfluenced attitudes or general feelings about the issue. Following this, two sets of closed response questions are used to elicit specific attitudes about the topic being investigated. In order to discover the reasoning behind reported attitudes, the respondent is asked a series of either closed or open-ended questions. Finally, the intensity of the respondent's views is measured.

A different sequence scheme involves organizing questions around similar topics or some other logical ordering procedure. For example, a series of factual questions could be followed by attitudinal questions. Because each study presents its own unique problems, only general principles for the best sequence are suggested:

1. Questions of a personal nature (age, income, etc.) should be the last questions on a survey. Many individuals do not want to immediately answer personal questions and will refuse to complete the survey.
2. Avoid influencing the respondents' thinking at the beginning of the questionnaire so that you are sure the responses obtained are their own.
3. Attempt to make the questionnaire attractive and interesting to the respondent.
4. Do not use questions which the respondent may find intimidating or irrelevant.

EXAMPLE: Ordering of Questions

The Scenic School District survey (see page 16) uses the logical ordering system. The first 14 questions measure respondents' knowledge and are factual. The next sequence of questions (15-20) measures attitudes. Finally, the last six questions are factual and provide personal information (age, residence, etc.) about the respondent.

STEP 8: ADJUSTING THE PHYSICAL APPEARANCE OF THE SURVEY

There are a few additional points to keep in mind when the survey questions have been ordered. The first rule is to maximize the "white space." Aside from being easy to read and having a neat appearance, a survey with a maximum amount of space allows the respondent adequate room to answer all questions and to enter any additional comments that are needed. Both the questions and pages should be clearly numbered so that the respondent will not become confused while completing the survey. If it is necessary to use both sides of a page, be sure to put the word "over" at the bottom of each page.

A general rule to follow when using close-ended questions is to arrange all response categories vertically rather than horizontally. This helps reduce the possibility of marking the blank after an intended response rather than before it. Also, if there are sections of the survey which consist of long checklists, skip a line after small clusters of items to help the respondent place answers in the appropriate spaces. Be consistent by placing all possible responses either on the left or on the right side of the page. When options are placed on both sides, completion of the survey becomes more difficult because the respondent must keep looking for the answers.

EXAMPLE: Option Listings

a. The physical condition of Scenic High School is:

☐ Don't Know ☐ Excellent ☐ Good ☐ Fair ☐ Poor

b. The physical condition of Scenic High School is:

☐ Don't Know
☐ Excellent
☐ Good
☐ Fair
☐ Poor

The vertical listing shown in question b is far less prone to respondent error and scoring error than is the horizontal listing in question a.

How a respondent answers one question may lead to differing sets of additional questions to be answered. For instance, if a respondent is in favor of building a new high school, a new list of questions becomes important: Where should the school be built? How much should it cost? However, it would be irrelevant to ask these questions of the respondent not in favor of a new building. Because the researcher cannot anticipate answers and cannot practically send several versions of a survey, questions are arranged so that the respondent is directed away from the irrelevant questions. This can be done through groupings, directions, arrows, or combinations of these approaches.

EXAMPLE: Avoiding Irrelevant Questions

a. Do you think a new high school should be built?

☐ No (Skip to question d)
☐ Yes (Answer questions b, c and d)

b. Where should the new high school be built?

☐ Carroll Junior High School site
☐ Alternative Carroll Township site
☐ Other (specify) _____

c. Should the building program include plans for a new stadium to be built adjacent to the new high school?

☐ Yes
☐ No

d. Do you own your home?

☐ Yes
☐ No

STEP 9: PREPARING THE COVER LETTER AND INSTRUCTIONS

Every survey should include a cover letter and a set of instructions for the respondent. The cover letter should be short (never more than one page), but still include all the following:

1. Remarks outlining the purpose of the study, how the data will be used, and why the respondent's cooperation is important.
2. A reference to the self-addressed stamped envelope included for the respondent's convenience.
3. A promise that in return for his time and effort, the respondent may obtain a copy of the final report. Although most persons do not take advantage of this offer, the researcher should be sure to send a report to those who do request one.
4. A date for the return of the survey. Unless it is essential that the survey be completed by some date, remarks such as "Please complete as soon as you can" are better than "Complete and return before September 10."
5. Some statement explaining why questions concerning the respondent's age, sex, salary, etc., have been included.
6. An estimate of how much time the respondent will need to complete the survey.
7. A name, title, phone number, or address of an individual who can give assistance in completing the survey and can answer questions about the survey.
8. A promise of confidentiality should be included when appropriate.

EXAMPLE: Cover Letter

The cover letter for the Scenic School District survey is found on page 15. Although brief, each of the eight points listed above have been addressed.

The directions, printed on the survey itself, will usually involve explaining the manner in which questions should be answered. Occasionally, simple definitions need to be included. But, no matter what type of instructions are used, they must be clear, leaving no uncertainty in the mind of the respondent about how to complete the survey. Repeat the return address for completed surveys by the directions on the survey form itself. Many individuals lose the cover letter and return envelope before completing the survey.

STEP 10: VALIDATING THE SURVEY

A survey is said to be "valid" when it measures exactly those things (attitudes, knowledge, agreement, dislike, etc.) that you say it does. One procedure to validate a survey is as follows:

- First step: Prepare a final draft of the survey following the first nine steps presented in this guide.
- Second step: Pilot test the survey. Ask your colleagues, friends, neighbors,

spouse, and children to complete the survey and provide responses. Rewrite parts of the survey as needed. Repeat this procedure as often as necessary.

Third step: Do an analysis of responses from the pilot tests. Evaluate each question on the basis of these summaries. Are the findings interpretable? Do the scores make sense? Rewrite questions and response options which are not clear. Prepare the survey for distribution.

EXAMPLE: Analysis of Pilot Study

Consider the following questions and tabulations:

a. Where do you think the new high school should be built?

Response

12%	Carroll Junior High School Site
8%	Alternative Carroll Township Site
80%	Other (Please specify) _____ Union Twp. _____

The results of the pilot study show question a to be ineffective. The most popular choice, Union Township, was not included but received 80 percent of the votes. This option is added to the response list.

b. If construction of a new high school was started within the next year, how much of an increase in school taxes would you anticipate?

5%	Less than 5 mills
20%	5-10 mills
20%	11-15 mills

Question b accounts for only 45 percent of all respondents who helped pilot test the survey. A review of comments on the returned forms shows that most respondents expected a tax increase of about 20 mills. Hence, the response options should be expanded to include "16-20 mills," "21-25 mills," and "over 25 mills."

Fourth step: Select a sample of respondents. Unless all possible respondents will be sent a survey, a sample will need to be identified. Sampling should only be done with the help of a statistician.

Fifth step: Field test the survey. Mail or distribute copies of the survey to a small group of the intended recipients. Ask them to complete the survey and comment on the clarity of instructions, quality of the cover letter, ease of responding to questions, appropriateness of questions and listed responses, physical appearance, and efficiency of question formats. Analyze data and comments. Rewrite as necessary and prepare the final version for distribution.

Sixth step: Prepare a management plan for the distribution of the survey specifying dates for actions and persons responsible. Surveys and return envelopes must be printed, addresses of respondents prepared, envelopes stuffed and mailed, returned surveys logged in, responses coded and analyzed, follow-up letters

mailed, and final reports written. Such a plan insures that the correct respondents receive the survey and that sufficient time is allowed for individuals to complete and return the form.

Seventh step: Field check survey responses. Telephone a sample of respondents and discuss in detail their responses and the meaning of the responses. This helps the researcher to correctly interpret the response summaries and to make improved inferences for future actions based on the survey results.

Following the steps described in this manual will simplify survey preparation and match collected information to the objectives of the research. Further, information collected can be analyzed and meaningfully interpreted. Thus, by following these procedures, the developed survey will serve the purpose for which it was intended.

COVER LETTER
AND
SCENIC SCHOOL DISTRICT SURVEY

SCENIC SCHOOL DISTRICT
152 MAIN STREET
ANYTOWN, PENNSYLVANIA 17777

Office of the Superintendent

January 5, 1982

Dear Resident of Scenic School District:

The Scenic School District needs your assistance in deciding whether a new high school should be built. This decision is important to the future of our students and will greatly impact upon our communities. Your opinion is important.

Please take about five minutes to complete and return the enclosed survey as soon as possible. A self-addressed stamped envelope has been included for your convenience.

All responses will be kept confidential. Questions concerning residence, age, and home ownership have been included to help us determine the needs of specific groups within Scenic School District. The results of this survey will be sent to you upon request in return for your cooperation.

Your assistance in this important matter is greatly appreciated. Please call John Jones, Assistant Superintendent, at 555-1212 (or write to the above address) if you have any questions or would like assistance in completing the survey.

Sincerely,

Sam Smith
Superintendent of Schools

Return to:

Office of the Superintendent
Scenic School District
Anytown, Pennsylvania 17777

SCENIC SCHOOL DISTRICT SURVEY

DIRECTIONS: Please complete this questionnaire by placing an "x" in the blank by your answer. Space has been provided for any additional comments you may want to make.

1. How many elementary school buildings were in operation in the Scenic School District during the 1980-81 school year?

☐ 6
☐ 8
☐ 10
☐ 12

2. How many junior high school buildings were in operation in the Scenic School District during the 1980-81 school year?

☐ 1
☐ 2
☐ 3
☐ 4

3. The oldest building still being used by the district was built:

☐ before 1890
☐ 1890-1910
☐ 1911-1930

4. The number of school buildings built before 1930 and still in operation in Scenic School District is:

☐ 0-1
☐ 2-3
☐ 4-5
☐ 6-7
☐ 8-9

5. How large is the Scenic School District?

☐ 35 square miles
☐ 45 square miles
☐ 55 square miles
☐ 65 square miles

6. The 1980-81 tax rate in Scenic School District was how many mills?

☐ 55
☐ 60
☐ 65
☐ 70
☐ 75

7. Check the option which best describes the general physical condition of each of the present high school buildings.

	Don't Know	Very Good	Good	Fair	Poor
Scenic	☐	☐	☐	☐	☐
Northern	☐	☐	☐	☐	☐

8. Check the option which best describes the condition of each of the following facilities at Scenic High School.

	Don't Know	Very Good	Good	Fair	Poor
Auditorium	☐	☐	☐	☐	☐
Athletic field	☐	☐	☐	☐	☐
Business area	☐	☐	☐	☐	☐
Gymnasium	☐	☐	☐	☐	☐
Home ec. area	☐	☐	☐	☐	☐
Industrial arts	☐	☐	☐	☐	☐
Library	☐	☐	☐	☐	☐
Physical education equipment	☐	☐	☐	☐	☐

Comments:

9. Check the option which best describes the condition of each of the following facilities at Northern High School.

	Don't Know	Very Good	Good	Fair	Poor
Auditorium	☐	☐	☐	☐	☐
Athletic field	☐	☐	☐	☐	☐
Business area	☐	☐	☐	☐	☐
Gymnasium	☐	☐	☐	☐	☐
Home ec. area	☐	☐	☐	☐	☐
Industrial arts	☐	☐	☐	☐	☐
Library	☐	☐	☐	☐	☐
Physical education equipment	☐	☐	☐	☐	☐

Comments:

10. What proportion of the high school students in the district attend Northern High School?

☐ 55% attend Northern HS (45% attend Scenic HS)
☐ 65% attend Northern HS (35% attend Scenic HS)
☐ 75% attend Northern HS (25% attend Scenic HS)
☐ 85% attend Northern HS (15% attend Scenic HS)

11. Which option best describes each aspect of the curriculum offered to students at Scenic High School?

	Don't Know	Very Good	Good	Fair	Poor
<u>Academic Areas</u>					
Business	☐	☐	☐	☐	☐
English	☐	☐	☐	☐	☐
Fine Arts	☐	☐	☐	☐	☐
Foreign Languages	☐	☐	☐	☐	☐
Mathematics	☐	☐	☐	☐	☐
Science	☐	☐	☐	☐	☐
Social Studies	☐	☐	☐	☐	☐
Health and Physical Education	☐	☐	☐	☐	☐
<u>Other Areas</u>					
Guidance	☐	☐	☐	☐	☐
Mini Clubs	☐	☐	☐	☐	☐
Band	☐	☐	☐	☐	☐
Extracurricular Activities	☐	☐	☐	☐	☐

Comments:

(Please continue on the opposite side.)

12. Which option best describes each aspect of the curriculum offered to students at Northern High School?

Don't Know Very Good Good Fair Poor

Academic Areas

Business	_____	_____	_____	_____	_____
English	_____	_____	_____	_____	_____
Fine Arts	_____	_____	_____	_____	_____
Foreign Languages	_____	_____	_____	_____	_____
Mathematics	_____	_____	_____	_____	_____
Science	_____	_____	_____	_____	_____
Social Studies	_____	_____	_____	_____	_____
Health and Physical Education	_____	_____	_____	_____	_____

Other Areas

Guidance	_____	_____	_____	_____	_____
Mini Clubs	_____	_____	_____	_____	_____
Band	_____	_____	_____	_____	_____
Extracurricular Activities	_____	_____	_____	_____	_____

Comments:

13. How do you think the variety of course options compares for the two high schools?

_____ variety of options about the same
 _____ wider variety of options at Scenic High School
 _____ wider variety of options at Northern High School

14. If construction of a new high school was started within the next year, how much of an increase in the school tax rate do you think would result?

_____ less than 5 mills
 _____ 5-10 mills
 _____ 11-15 mills
 _____ 16-20 mills
 _____ 21-25 mills
 _____ over 25 mills

15. Do you think that combining the two existing high schools into one would result in:

Don't Know Yes No

improved instruction?	_____	_____	_____
broadier curriculum offerings?	_____	_____	_____
an improved overall quality of education?	_____	_____	_____
reduced cost of operation?	_____	_____	_____
improved relationship among students from the various communities within its district?	_____	_____	_____

Additional comments:

16. Most students attending the new high school would have to ride a school bus. What is the maximum time for a one-way bus trip which you consider acceptable for high school students?

_____ minutes

17. Do you think a new high school should be built?

_____ No, skip to question 21.

_____ Yes, answer questions 18 through 26.

18. Where do you think the new high school should be built?

_____ Carroll Junior High site
 _____ Alternative Carroll Township site
 _____ Union Township
 _____ Other (specify) _____

19. Do you think the building program should include plans for a swimming pool at the new high school?

_____ Yes
 _____ No

20. Do you think the building program should include plans for an athletic stadium at the new high school?

_____ Yes
 _____ No

21. Indicate the township or borough in which you live.

_____ Carroll Township	_____ New Eagle Borough
_____ Donora Borough	_____ Nottingham Township
_____ Finleyville	_____ Union Township
_____ Monongahela	

22. Do you own your home?

_____ Yes
 _____ No

23. Indicate your age.

_____ under 20 years _____ 40-59 years
 _____ 20-39 years _____ 60 years or older

24. Do you have any children younger than five years of age?

_____ Yes
 _____ No

25. Do you have any children who attended a public school this past year?

_____ Yes
 _____ No

26. Do you have any children who attended a private or parochial school this past year?

_____ Yes
 _____ No

SUMMARY CHECKLIST

The quality and validity of all surveys must be studied. Whether you prepare your own survey using this manual or you use a survey written by someone else, carefully evaluate the instrument on the following points adapted from a text by Payne*:

1. Specify the survey objectives and research questions.
 - Make sure that you have a clear understanding of the objectives yourself. This is of first importance if you are to make it meaningful to others.
 - See that the objectives are fully defined by means of the research questions.
 - State the research questions as precisely as you can at first. If in later versions you elect to sacrifice some precision, then at least the sacrifice will be recognized.
2. Review the literature related to topics being studied.
 - Examine previous studies for type of questions asked, problems encountered and probable research findings.
 - Try to find an existing survey which validly serves your purpose.
3. Define all abstract concepts included in the list of objectives.
 - Trade jargon may be all right to use in the trade, if all the trade uses it, but it will not do for the general public.
 - Check in the dictionary to see if the word actually does have the meaning you intend.
 - While there, see what other meanings it may have which could confuse the issue.
 - If you use a synonym, make sure that it actually is synonymous with the idea at hand.
 - Words that are frequently used are to be preferred, other things being equal, of course.
 - Familiar words are the most useful if they don't have too many meanings in context.
4. Decide what type of question format will be used.
 - Decide what type of question best fits the issue -- open- or close-ended.
 - Is it necessary to ask this free-answer question? Remember that the coding of answers to this type of question can be tedious.

*Payne, S. L. The art of asking questions. Princeton University Press, 1951.

- Consider whether it is convertible to a categorical type of question. If the different points of view on the issue are generally well known, then you may wish to present them as alternatives (multiple choice) rather than leave them to the respondents to articulate in their various ways.
 - Make the question sufficiently directive. An open-ended question can be too broad and leave respondents free to give answers from every direction.
5. Determine what type of statistical analysis is needed.
- Remember that your fine distinctions will often not be understood by the respondents.
 - Instead of the indefinite "how much?" approach, you can save work for yourself by indicating the system in which you want the answers to come--percentages, dollars, miles, pints, etc.
 - For possible trend purposes, try to imagine how the question will sound five years hence and adjust it to fit that possibility.
 - You may find it necessary to establish some kind of standards or comparisons for respondents to use.
6. Keep in mind writing rules when constructing the survey questions.
- Use as few words as necessary. You can ask most questions in 20 words or less.
 - Use simple words if you can find any that adequately express the idea.
 - Among the possible prestige influences to be eliminated or counter-balanced are appeals to one's wisdom, knowledge, fairness, affluence, physical attributes, morals, and devotion to duty.
 - Expressions of wishful thinking need to be exposed for what they are rather than taken as predictions of future action.
 - Unless a stereotype is itself an important part of the issue, you will want to avoid using it when obtaining evaluations of the issue.
 - A personalized question may produce different answers than an impersonalized one.
 - Answers to hypothetical questions may not be so valid in predictions of future behavior as answers in terms of past experiences may be.
 - "Don't Know" or "Not Sure" answers have to be provided for except in rare instances.
 - Ordinarily the choices should be mutually exclusive. If they cannot be made so, then you should add an answer box for the "Both" category.
 - It may be better to state both sides of the argument in a question so that the respondent knows the pro and con.
 - Word your question according to principles of good grammar, but don't make it sound stilted.

- Beware the double entendre and shun the triple. "Please check sex," for example, has three meanings -- mark, restrain, and verify.
 - Double negatives should not be inflicted upon anyone. A difficult problem is to make your question specific enough without making it over-elaborate.
 - All possible alternatives should be included if a true expression of choices is desired. If combinations of the alternatives are possible, those combinations should be included.
 - The number of alternatives need not always be limited to only five or six.
 - Double-barreled questions deserve to be split into separate questions for each of the two issues except in special cases where two issues necessarily have to be asked together.
 - Placing the correct numbers in a knowledge question at the extremes of the list is a wise move because respondents tend to guess the middle or average ones.
7. Choose the question sequence which best fits the type of survey being conducted.
- Group questions together which use the same directions or same responses to save respondent irritation and time.
 - George Gallup reminds us of five elements in an opinion--awareness, general opinion, specific opinions, reasons, and intensity. Use this sequence when possible.
8. Follow guidelines for the physical appearance of the survey.
- Numbers should be listed in logical order out of courtesy.
 - Maximize the "white space."
 - List multiple responses vertically.
9. Be sure to include clear instructions and a cover letter.
- Decide whether you want respondents to express one choice or more than one and indicate your decision clearly for them.
 - Place instructions only on the survey form.
 - The cover letter should include:
 - an explanation of survey purpose and how collected information will be used
 - a reference to a self-addressed envelope, if included
 - a promise to provide survey results upon request
 - a return date when absolutely necessary
 - an explanation of the need for personal information
 - an estimate of how long it takes to complete the survey
 - a name and telephone number of someone who can answer questions about the survey
 - a promise of confidentiality, if necessary

10. Validate the finished survey before distribution to recipients.

- Pilot test the survey. Rewrite as necessary.
- Select a sample of respondents with the help of a statistician.
- Field test the survey. Rewrite as necessary.
- Prepare a management plan for the distribution of surveys and follow-up activities.
- Field check a sample of responses as an aid to interpretation of findings.

This concludes the guidelines for preparing a survey. Use the following self-evaluation checklist to evaluate the surveys you prepare.

SELF-EVALUATION FORM FOR SURVEY DEVELOPMENT

STEP	ACTION	Date Required	Person Responsible	Reviewed (Initials)	Accepted (Initials)
1. Specify survey goals and objectives	1. List goals and objectives 2. Compile research questions 3. Organize research questions 4. Approval by client				
2. Review of Literature	1. Review topics 2. Review previous research 3. Collect surveys from previous studies				
3. Define Abstract Concepts	1. List all concepts within research topic 2. Define through review of literature 3. Define exactly all terms for the survey				
4. Select question formats	1. Match format to topic, research questions, and abstract concepts 2. Check for clarity and efficiency				
5. Select the statistical analysis	1. Outline the presentation format needed 2. Match planned analysis to research questions 3. Anticipate needed information by group, individual characteristic, demographics, etc.				

STEP	ACTION	Date Required	Person Responsible	Reviewed (Initials)	Accepted (Initials)
6. Write survey questions	1. Match survey questions to objectives and concepts 2. Match survey questions to needed analyses 3. Follow question formats selected				
7. Order the survey questions	1. Group questions by similar directions, topics, concepts, or item types 2. Funnel to avoid irrelevant questions				
8. Adjust physical appearance of survey	1. Maximize white space 2. Allow sufficient room for response and comments				
9. Prepare cover letter and instructions	1. Cover letter should: a. Give purpose of study b. Reference return envelope c. Promise report of findings, if requested d. Suggest a return date e. Explain personal questions f. Estimate response time g. Provide name of person to contact for assistance 2. Instructions should provide clear directions to all respondents 3. Include return address on survey form itself				

STEP	ACTION	Date Required	Person Responsible	Reviewed (Initials)	Accepted (Initials)
10. Validating the survey	1. Prepare final draft of survey, cover letter, and instructions 2. Pilot test (peer review) 3. Analyze pilot test responses, rewrite as necessary 4. Field test (sample actual recipients) 5. Analyze field test and rewrite as necessary 6. Prepare a survey management plan 7. Field check survey responses				